EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Directorate D - Nuclear energy, safety and ITER
D.3 – Radiation protection and nuclear safety

Verification under the terms of Article 35 of the Euratom Treaty

Main Conclusions

THE SLOVAK REPUBLIC

Bratislava

Routine and emergency radioactivity monitoring arrangements
Monitoring of radioactivity in drinking water and foodstuffs

Dates	25 – 29 April 2022
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INTRODUCTION

Article 35 of the Euratom Treaty requires that each Member State shall establish facilities necessary to carry out continuous monitoring of the levels of radioactivity in air, water and soil and to ensure compliance with the basic safety standards[1].

Article 35 also gives the European Commission (EC) the right of access to such facilities in order that it may verify their operation and efficiency.

The Radiation Protection and Nuclear Safety Unit (ENER D.3) of the EC's Directorate-General for Energy (DG ENER) is responsible for undertaking these verifications.

The main purpose of verifications performed under Article 35 of the Euratom Treaty is to provide an independent assessment of the adequacy of monitoring facilities for:

- Liquid and airborne discharges of radioactivity into the environment from a site;
- Levels of environmental radioactivity at the site's perimeter and in the marine, terrestrial and aquatic environment around the site, for all relevant pathways;
- Levels of environmental radioactivity on the territory of the Member State.

A verification team from DG ENER visited the Slovak Republic on 25 – 29 April 2022 to review:

- Facilities for routine monitoring of environmental radioactivity in Bratislava;
- Facilities for emergency monitoring of environmental radioactivity in Bratislava;
- Measuring laboratories, in particular infrastructure, analytical methods, quality assurance and control aspects;
- Reporting of the environmental monitoring programme results.

This document gives an overview of the verification team's main conclusions on the environmental surveillance systems in place and recommendations for their improvement. More detailed information concerning the verification is available in the technical report (TR) of the verification.

MAIN CONCLUSIONS

The verification team successfully completed every verification planned for the visit. The information supplied by the Slovak authorities in advance of the visit, as well as the additional documentation received during and after the verification, was useful.

(1) The verification activities that were performed demonstrated that the facilities necessary for the monitoring of levels of radioactivity in air, water and soil in Bratislava are adequate. The Commission could verify the operation and efficiency of a representative part of these facilities.

(2) The verification activities that were performed demonstrated that the facilities necessary for the monitoring of levels of radioactivity in air, water and soil in Bratislava in the event of a radiological emergency are adequate. The Commission could verify the availability of a representative part of these facilities.

[1] Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom (OJ L 13 of 17.1.2014)

(3) The verification team wishes to make the following recommendations:

a) The Slovak Public Health Authority (PHA) radiological laboratory sample and data management is based on Excel sheets and a paper logsheets (TR section 7.2.1).

The verification team recommends that the PHA implements a dedicated laboratory information management system (LIMS).

b) The PHA radiological laboratory performs weekly controls of HPGe-detector efficiency and energy stability, but these controls do not include detector system resolution (TR section 7.2.2).

The verification team recommends that the PHA laboratory initiates regular control of gamma spectroscopy system resolution (FWHM of the Co-60 peak at 1332 keV) and logs the control results in a long-term trend graph.

c) The PHA radiological laboratory has sufficient space for storing and managing increased number of incoming (radioactive) samples in the event of an emergency, and by reducing the counting times the laboratory capacity could be increased to facilitate higher sample throughput, but there is no formalised plan for a this type of situation (TR section 7.2.7).

The verification team recommends, that the PHA drafts an internal preparedness plan for laboratory operation in an emergency situation, taking into account the increased number of incoming environmental samples with radioactive contamination.

d) The air sampler at the PHA building roof is quite old (20 years), so it is getting close to the end of its operating life (TR section 7.4.3).

The verification team recommends that the PHA proceed to acquire a new medium- or high-volume air sampler for Bratislava (preferably two of them) in the near future.

e) The air sampler at the PHA building roof does not have a position for installing a charcoal filter for gaseous iodine monitoring (TR section 7.4.3).

The verification team recommends that the PHA implement a system for monitoring gaseous radioactive iodine in Bratislava.

f) The PHA mobile equipment kit does not contain an air sampler, or any other device to detect particulate radioactive material or gaseous radioactive iodine in air (TR section 7.6.1).

The verification team recommends that a mobile small-volume air sampling capability (aerosols and gaseous iodine) be included in the PHA mobile monitoring equipment.

These remarks aside, the verification team nevertheless concludes that the verified parts of the monitoring facilities and the monitoring system for environmental radioactivity in Bratislava conform to the provisions laid down under the Article 35 of the Euratom Treaty.

(4) The detailed verification findings are compiled in the 'Technical Report' that is addressed to the Slovak competent authority through the Permanent Representation of the Slovak Republic to the European Union.

(5) The Commission services kindly request that the Slovak authorities submit, before the end of 2024, a report on their implementation of the recommendations, as well as on any significant changes in the set-up of the monitoring systems. The Commission will take this report into account when considering whether a follow-up verification would be necessary.

(6) Finally, the verification team acknowledges the excellent co-operation it received from all persons involved in the activities it performed.

V. Tanner

Team Leader